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ABSTRACT

This guide is designed to assist adult educators who are also first-time practitioner-researchers. It is organized in three parts. Part 1 is an introduction to practitioner research. The following steps of designing and conducting a research project are examined in a section on strategies and methods: identify a research question, collect data, analyze data, summarize analysis findings, share your findings. Suggestions for dealing with problems in conducting or writing up the research project are outlined. The third section presents the case studies of five members of the Virginia Adult Educators Research Network who have conducted their own research projects. Each case study is preceded by background on the researcher and her project and includes a summary of the individual researcher's project along with comments, cautions, and words of encouragement. Appended are a description of the ERIC system, a suggested outline for writing up a research study, and a list of seven network resources. Contains 17 references. (MN)

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ED 362 713

The Adult Educator's

GUIDE

to

PRACTITIONER RESEARCH

U.S. DEPARTMENT OF EDUCATION
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July 1993

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Mostly, I want to thank Hanna Fingeret - my first, and best, research teacher.

INTRODUCTION

This **GUIDE** was designed by the Virginia Adult Educator's Research Network with the first-time practitioner-researcher in mind. The staff at the Research Network had been working with researchers for two years and during annual evaluations many of them had asked for a handbook with plenty of "how-to." We found several good handbooks, but we still felt the need for something more condensed. We also wanted to capitalize on the rich experiential background of the practitioner-researchers in Virginia. Our work is confined to the practice of adult education and literacy; however, the **GUIDE** should be useful for practitioners in other sectors of education as well.

The **GUIDE** is written in three parts: an introduction to practitioner-research, a list of stages or steps found in most research projects along with suggestions for each, and a series of case studies. The case studies, excerpts from the stories of several practitioner-researchers, illustrate the stages discussed in the previous section and help bring the process to life for the reader. Immediately preceding the case study section, the reader will find a section called "What to Do When You Get Stuck." This is a trouble-shooting section, and is printed on colored paper for fast reference.

I have used the pronoun "she" throughout the **GUIDE** in reference to the practitioner-researcher. I used one gender only to make the text easier to read and chose the feminine in honor of the researchers who shared their stories with me.

The Research Network certainly did not invent practitioner-research. I drew heavily upon the work of others in preparing the **GUIDE**; I especially want to thank them for clearing a path for me. I was inspired in this work by a speech Marian Mohr gave at the Virginia Association for Adult and Continuing Educators conference in April 1993, and I have enjoyed working with Marion MacLean on several projects. I highly recommend their book, **Working Together: A Guide for Teacher-Researchers**, to anyone who wants to go beyond the beginning this book makes. I am also indebted to Leslie Patterson, Carol Minnick Santa, Kathy Short,

and Karen Smith, who edited **Teachers Are Researchers: Reflection and Action.** Both of these books helped me conceptualize my own experiences with research and gave me a language for articulating the process of doing research.

This **GUIDE** is a publication of the Virginia Adult Educator's Research Network, a project funded by the Virginia Office of Adult Education. Since July 1991, The Research Network has been dedicated to encouraging practitioner research among adult educators in Virginia. The Research Network provides research grants to practitioners and graduate students through a proposal process. We also support researchers by maintaining communication through membership letters, state newsletter articles, the **Year In Review** (a publication of practitioner-researcher reports), a professional reading review, and a membership directory. We welcome comments and questions from our readers. You can contact us at:

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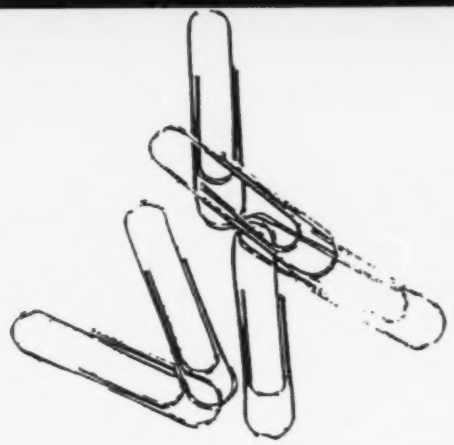


What Is Practitioner Research?

Teaching and learning are intriguing activities. Learning how to teach can easily take a lifetime. Most educators can remember episodes in classes when they tried something new and it worked beautifully—students learned, and the teacher gained more understanding about the art of teaching. Most educators can also remember times when things didn't go so well; when good intentions and past "fool-proof" learning strategies simply didn't work. Let's examine one of these situations more closely. Feeling frustrated because a lot of students have dropped out of her class, a teacher might talk with other teachers and ask for suggested strategies that might improve retention. She might try out some of the suggestions. If the activities work, she might add them to her routine. If they don't, she would forget about them. This episode might be a learning experience for the teacher, but it would not be research.

Research is more than trying out new ideas or proving something works in the classroom. When we conduct research we examine a situation or problem very carefully to find out "why" or "how." A practitioner-researcher would think more about the situation before she began a trial-and-error type of approach to "fix" the problem. She

would think about the underlying questions involved with this dilemma of students who just up and leave. Research questions related to this situation might be: What influenced the students to come to class in the first place? What were they looking for? Did they not find it, or did they change their minds about what they wanted? Did something just come up in their lives, making class attendance impossible, or were they disappointed in what they found in class?

> Research is what we do in order to better understand our situation.

Research questions not only help teachers improve their classroom practice, but these questions also have greater implications: They lead the researcher down a path towards a more profound understanding of students and teaching.

Throughout this Guide we will refer to the researcher as a "practitioner-researcher." We use this term to include teachers, tutors, aides, administrators, and students as potential researchers. We will speak of questions arising from situations in the "class," but this can also be the program, the tutoring relationship, etc. The important thing to keep in mind is that we are addressing research conducted by people involved in the situation, not outside observers. These involved researchers are well acquainted with the programs and classrooms being studied; they know all the characters involved. They also have

an immediate need for the results of their research. They care about their work and they know that they can be a more successful practitioner if they have a better understanding of their situations.

Many people have a preconceived idea about research. We may be a little afraid of the word—it can imply a preoccupation with cold, hard facts, an almost sterile way of looking at humanity, or an insistence on precision. We picture "researchers" as distant, boring people who are very unaccepting of those with lesser minds; people who speak in numbers instead of words; and people who spend all their waking hours in science labs peering into microscopes or at computer screens. Yes, an exaggerated picture, but you did recognize it, didn't you? In light of this image, it is little wonder that most people assume that they are not capable of doing pure, scientific research in their classes and that any attempt to research their questions will result in useless, un-scientific information.

It is true that practitioners cannot easily conduct "pure" research in their classrooms. Even professional researchers, who come into the class as non-participant observers or who assess large populations using scientific standardized tests, have a difficult time creating a controlled experiment. As practitioner-researchers we don't try to create the pure environment necessary for conducting experimental research. We draw from what we have experienced - our programs and classes, and our knowledge and experiential background with them. While we may not always come up with answers which we can confidently say will hold true in all adult education programs across the

nation or the world, we can gain a deeper understanding of our particular situation. And in the final analysis, this type of information is probably much more useful to us as practitioners anyway. **The primary goal of practitioner research is to improve practice through better understanding.** This type of research is best conducted where the action happens - our programs, our classes, our students, ourselves. Marian Mohr and Marion MacLean state this with conviction:

> *Teacher-researchers begin with what is already familiar to them—their students and their classrooms. As a result, it is difficult to gain distance and perspective, but, by doing so, they accomplish something even more difficult: they begin to examine themselves as part of the context. This examination, we think, is a fundamental characteristic of teacher-researchers: their research includes them as significant factors. They observe from an involved distance. To the extent that this doing of observations becomes a habit and its own reward, teachers may see and think differently about themselves in their professional roles.*
>
> *(Mohr and MacLean, 1987, p. 62)*

Practitioner research is valid because it is grounded in real life situations. This type of research uses lavishly detailed descriptions—of students, classes, activities, conversations, etc.—because the researcher knows the significance of the context. How often have we heard a teacher say "I'm glad that works in your class, but my class is different!"

A practitioner-researcher is sensitive to the context-dependent nature of her study, and she documents this context as thoroughly as possible.

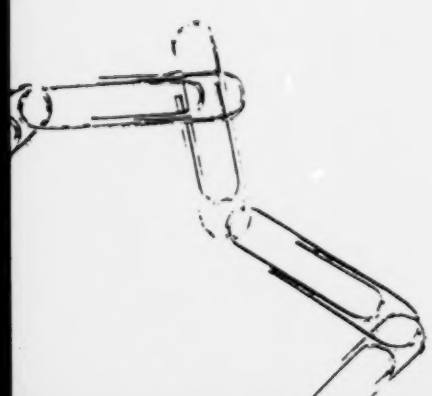
Alternately, the researcher is not concerned with replicability—that is, whether or not another teacher conducting similar research in another class will get identical results. Her primary goal is to become a more skillful adult educator. As practitioner research becomes more prevalent, researchers will be able to compare their findings with those of other practitioners and some trends may be found across programs. But for the moment, the first-time researcher can set out to better understand her own students with the confidence that she will end up with information which is useful to her.

Before going into a more detailed description of the steps involved in practitioner research, we want to address the areas of theory and practice. A recent evaluation of staff development in Virginia (Fingeret and Cockley, 1991) reported that teachers want practical knowledge in the form of teaching tips and that they often say they want these tips without any talk of theory. The implication is that theory is rather meaningless jargon and that teacher tips are just plain old common sense. We feel that there is no separation between practical tips and theory. Every tip, every activity, every workbook page, every remark we make in class, and every program funding decision we make is based on a theory. In general, we can think of our theories as sets of assumptions we make about why we are

teaching, what we are communicating, how adults learn, and so on. We usually don't think about our theories but they reside in our sub-conscious and direct our actions.

> When a teacher or administrator decides to research a question, she has decided to become conscious of her theory, and to examine the assumptions of that theory as objectively as she can.

Sometimes, what we say we believe about teaching and the assumptions which are implied by what we actually do when we teach are totally different. Practitioner research can bring this to our attention. This discovery can be at once humbling and liberating. The development of a critical view of our assumptions is an important part of becoming a reflective practitioner-researcher.



Strategies and Methods

There are several distinct steps a researcher goes through when conducting research, but they don't necessarily happen in a specific order and you don't need to finish one step before you move on to the next. Often steps are re-visited, adjusted, and put aside temporarily, to be taken up again later. We believe that all of the steps are crucial and, at some point, the researcher must finish the study. More on finishing the study later. We'll move on to the basic steps now.

Stages of the Research Process

Identify a Research Question

Collect Data

Analyze Data

Summarize Analysis Findings

Share Your Findings

Identify a Research Question

Be patient toward all that is unsolved in your heart and try to love the questions themselves.

Rainer Maria Rilke, 1934

It is essential that, as a researcher, you **choose the research question**. Don't commit yourself to a research project designed around a question which someone else finds fascinating but which leaves you cold. If you are answering a call for volunteers to research a particular topic, do so only if the topic truly interests you and allows you to focus your part of the project on something that intrigues you.

> Figure out what you want to know about a particular topic area and what sort of information or knowledge would be useful to you in your everyday work life.

Don't worry about whether someone has "already done" your research topic. No one has done it with your students, in your setting. If you've ever taken a course on the historical perspectives of education, you know that there is very little that hasn't already been done and, paradoxically, there is no philosophical canon so sacred to the study of education that researchers don't occasionally question and re-examine it.

In the following stage you will gather information (data) to help you address your inquiry, so limit your question to one that calls for

the type of data you can provide. For example, it would be difficult to study how well students retain skills after they leave the program if you are working with a very mobile population, which frequently moves and often has phone service discontinued.

You may have trouble developing a research question. If nothing intrigues you, watch and wait. While you are waiting, begin keeping a work journal. Keep track of what you do in class and how the class reacts. Practice being a fly on the wall; write down what you see and hear. Also write about what you feel—your reactions, hunches, etc. Reflect on your observations. Chances are, before long you will begin to get very curious about some aspect of your class.

After you have a general idea of what you want to find out, you will need to focus or **frame your question.** This step is important.

> If your question remains too general, you will find yourself with a confusing multitude of sub-questions. If you work with a question which is too narrow, you will block the emergence of any other possibilities.

Rule out questions which can easily be answered by "yes" or "no." Ask yourself: What concerns or intrigues me about this? What do I really want to know more about? Why do I want to know it? Pose your question in a way that will generate descriptions and observations as answers. Remember in the first section, we talked about asking "why" and "how." As Hubbard and Power (1993)

suggest, "framing the question in this way helps make the research doable in the midst of teaching: there is no rigid procedure that may interfere with the flow of the classroom and with the changing needs of students" (p. 23). Trust your hunches to guide your research.

Most importantly, don't become so cemented to your question that you can't allow yourself to change and adjust it along the way. You need to begin by framing your question, but as you begin to collect information and reflect upon it, you may very well gain insights that will lead you to re-adjust your question. It's not usually advisable to completely change the topic area mid- stream, but you can fine-tune your perspective.

Collect Data

It's all data.

personal conversation, Hanna Fingeret, 1993

There's more going on in your classroom than you think. One researcher described this stage of her project as "a human drama, being acted out every day."

There are a variety of ways to gather data. Plan to use more than one strategy. Triangulation is an accepted model. This simply means getting at the same information using different types of sources (three sources is standard). For example, if you want to learn something about student motivation, you might 1) use an in-take

questionnaire, 2) video-tape student interviews, and 3) talk with teachers about what they believe motivates students.

Here is a list of methods for data gathering to get you started:

Teacher's log or journal

A teacher's log or journal is a notebook where a practitioner can keep track of what they are doing and, just as importantly, what their own thoughts and insights are about their practice. Keeping a teacher's journal is extremely useful, even if you never do any research. Get into the habit of writing observations and thoughts about your work. Some researchers do this during very brief quiet times in the classroom, others spend time after class taking notes or use larger chunks of time at the end of the day. Journal writing is second nature to some people and pure agony to others. If you fall into the latter group, you might want to ease yourself into journal writing by using the following methods:

* Try writing in your journal for just 10 minutes a day. Just keep spilling words on the paper (or keyboard).

* If you get stuck try filling in "I remember in class today..."

* Write what you did, what the students did, who yawned, who walked in late, who wasn't there, etc.

* Speculate about everything you've observed.

After a week or two of this, re-read what you have written; you may be pleasantly surprised at what you find. Look for a pattern in your concerns or delights, and brainstorm a list of things that you wonder about. Research has begun.

Observation

Learn to be a keen observer. If you have ever watched people in an airport, you know how much is going on all around us, everyday. In a certain sense, nothing that goes on in your class or program is insignificant. As one researcher said, "I began to see that everything is data."

Observation can take several forms. Use any form or forms which seem appropriate and helpful for your project. Here are some suggestions to think about:

* Observe your own students.

* Observe another teacher's class.

* Observe yourself - to keep track of what you see, write about what you do or ask another teacher to observe you and talk with you later. Consider making a video-tape of yourself teaching, to look at later.

In general, you want the observed to act as normal as possible, so sit in the back and don't participate.

Make sure you have permission to observe from the people involved. Written consent is the safest, although verbal consent is acceptable. Let the people you are observing know what you are doing, although it is not usually necessary or advisable to explain in great detail all you hope to accomplish. Be respectful and unobtrusive. Keep in mind that you are there to understand something, not to criticize.

Interviews

You can interview:

students

your colleagues

politicians

total strangers

anyone.

These interviews can be with:

individuals

or

groups.

When you conduct an interview you can use a list of questions you made up before the interview, recording each answer and then moving on to the next question. We refer to this as a scripted interview. As an alternative, you can conduct an interview in which

you focus on a topic but do not follow a list of pre-made questions. In this type of interview, you will want to ask one or two opening questions, usually something that helps the person you are interviewing tie your research question into his or her own personal experience. For example, when a study of staff development was conducted, interviewers began by asking teachers to describe their first day and how well prepared they were. Needless to say, every teacher could relate this to his or her own experience. You can do both scripted and focus interviews with individuals or groups.

During a focus group interview, the researcher facilitates a conversation among five or so people, keeping the discussion in a general area, but allowing the participants to go off on related tangents and comment on each other's statements and questions. A scripted group interview is guided by a script of exact questions, with little or no follow-up, elaboration, or group discussion.

Scripted interviews produce responses which are fairly easy to categorize and analyze. However, the responses are not as rich in detail as the more free-wheeling give-and-take you get from a focus interview. In other words, you get more information from the focus interview, but you will have to work harder to figure out what it means.

Decide how you will remember everything that is said during an interview. You need to "capture" all the information for later analysis. In the old days, researchers just took notes. It still works and is the preferred method if the people you are interviewing are uncomfortable

about being recorded. If you haven't established a trust relationship with the interviewees, take short notes as inconspicuously as possible. Here are some other methods to consider, depending upon the comfort level of the people you will be interviewing:

* Tape interviews on audio- or video-tape. Each presents some advantages and disadvantages, of course. Video-tape has the potential for saving lots of information, and is especially useful for capturing gestures and expressions. On the other hand, it is not easy to use skillfully. Many people feel very self-conscious in front of the camera. This can be a problem with the audio-tape also, although the technical aspects are easier to master.

* Tape telephone interviews, also. Phone-to-tape recorder devices are available at many electronics stores. Make sure you ask permission to tape phone conversations before you turn on the machine!

Ask people for their permission before you tape them. Commit yourself to confidentiality.

No matter which method you use to record interviews, spend some time **immediately** following the interview to complete your notes with your observations and insights. This is especially crucial if you are taking notes during the interview - you can't write down everything. Even if you have taped the interview, you will want to record your observations. (When the student said he really liked the

new math book, did everyone nod in agreement or look like they thought he was crazy?) Most researchers develop a personal short-hand and then complete their notes while the details are still fresh in their minds. You lose those details quickly, so don't delay too long.

Surveys

Whip up a survey, stick on the mailing labels and wait for the results to come pouring back in. It sounds so simple, but beware!

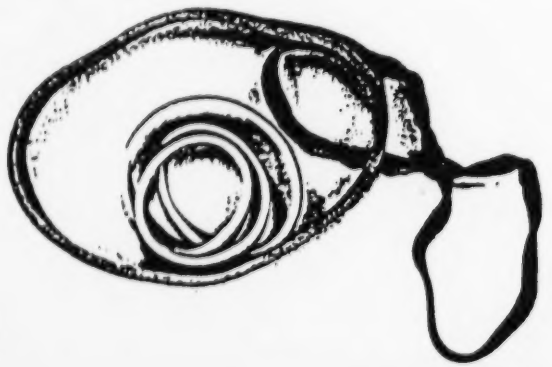
> It is very difficult to ask exactly what you want to ask in a survey in such a way that your reader knows exactly what you mean.

You really need to custom design a survey for the specific population who will be answering. Consider the people who will be reading your survey and answering the questions:

* How would they word the questions you want to ask?

* Will people be willing to write long answers to essay-type questions?

* Have you allowed enough space for longer, handwritten answers?



* How many surveys have these people received in the mail lately? Perhaps they are tired of answering them. This may be a problem if there are several practitioner-researchers in your area who are sending surveys to the same group of students or teachers.

If you still decide to do a survey, here are some steps to follow:

* Gather a group of people who are representative of the folks who will be receiving the survey and ask them to give you some advice.

* Show them what you are proposing and listen carefully to their comments.

* Send the survey to another representative group and ask them to fill it out.

* Did you get responses which answered the questions you were really asking? If not, try to re-word your survey and test it out again.

Student Writing

Entire studies have been conducted using only student writing as data. Students' writing can be from their own journals, samples of letters they write, or teacher-assigned writing.

* Students grant permission for researcher to use their writing.

* Writing samples are collected by the researcher.

* Samples are examined for themes.

Records and Assessments

Depending on what you want to know, you may want to use:

attendance records

informal test scores

informal assessment, such as portfolios.

Again, with informed consent.

Dealing with Preconceived Ideas

During this time, keep a lively commentary going in your journal about what you are seeing and hearing.

* Reflect on the information you're getting.

* Think about how it relates to your question.

* Admit your concerns, especially about any preconceived ideas you may have.

If you secretly want the results of your research to say a certain thing, admit this to yourself (preferably in writing) and then go about trying to prevent your predisposition from coloring what you see and hear. As you create questions for a survey or interview, ask yourself if you are setting up the respondent for a particular answer. You can also ask an objective person to review your questions. Anyone who truly cares about his or her work will have some strong opinions going into a research project, but research without honesty and integrity is useless.

Finishing the Collection Stage

When have you gathered enough information?

* Stop once it seems as though everyone is saying just about the same thing, or the same group of things.

* Go back to your original question.

* Does your collection of information still address it?

* Does it suggest that you ask the question in a different way?

Be wary of starting off in a new direction - tracking down a completely new research question - before you have finished analyzing and summarizing the first one. At some point, you must "get out of the field" and begin to analyze what you've collected. Most of us feel like we're not quite ready to do so, but practical restraints (time, money, irate family members, etc.) force us to stop.

Analyze Data

> *When you are a Bear of Very Little Brain, and you Think of Things, you find sometimes that a Thing which seemed very Thingish inside you is quite different when it gets out into the open and has other people looking at it.*
> *A.A. Milne, (1928)*

So now you have a stack of surveys, transcripts and notes in front of you. What does it all mean? What can it teach you? You are ready to examine, or analyze, your data.

Analysis is best done over time. You begin analyzing when you first work to focus your research question, and you never really stop. Allow yourself plenty of time for this stage.

> It is a good idea to lay your data aside for a while once you have stopped collecting them.

Revisit the things you've collected. You will want to:

* Re-read your journal.
* Listen to those taped interviews.
* Look at the surveys.
* Go through student writing samples.

At this stage, you look for trends, ideas, or concepts that just keep coming up.

Develop a system for categorizing these ideas or concepts. You will find it helpful to develop a framework - a structure for organizing your information. First, get all your information on paper. Write out transcripts of taped interviews, if possible. Many researchers use colored highlighter to categorize each quote or response in the interviews, surveys, writing samples, and their own journals.

* Use a different color highlighter to code each theme.

* Cut up (literally) the data into single colored bits.

* Pile the slips of paper by color/theme.

* Examine each pile, dividing strips into sub-categories if appropriate.

* Write a one or two sentence summary of each pile. These summary sentences are the themes (sometimes referred to as "trends") in your findings.

These themes may not be what you expected or what (in your heart of hearts) you had hoped. There might be contradictory ideas. Take them for what they are, no more, no less. While you can't write a summary sentence for each and every slip, you should make sure that each quote or comment is represented in one of the summary sentences. Careful use of the words "most," "many," "some," "few," etc. will help qualify what you say: to show that many, but not all, gave a particular type of response.

At this point it is helpful to write a one-page summary of all your findings.

This activity is sometimes referred to as "getting rid of data," or "chunking" data into larger categories, to make it more manageable and easier to examine as a whole.

It is especially useful now to read what other researchers have found.

Having slogged about in the data for a while, you will find that the research reports of fellow sloggers make much more sense than they would have before your research began. They may provide some insight into your own findings. We suggest you use an ERIC (Educational Resources Information Center) search procedure to find research reports relevant to your own study. See Appendix A for more information about ERIC searches.

Begin with current research. You can read the abstracts to get the gist of each article or book and then read the ones which look particularly relevant to your work in their complete form. Pay attention to how the research was conducted and which themes emerged. Keep track of all the citations in the reports. Remember to look at the bibliography at the end. Before long, it will probably seem like everyone is quoting the same one or two studies. Track down those research reports and read them carefully. They are probably the seminal pieces, the major studies with which all the professional researchers in this field are familiar. Your findings may or may not agree with these important studies, but it's good to know how your results compare to the most prevalent studies in the field.

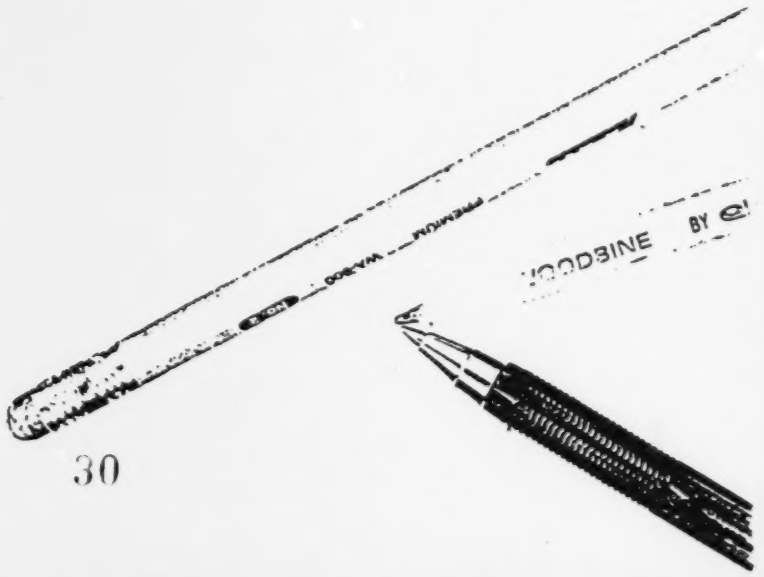
Summarize Analysis Findings

When you come to the end, stop.
Lewis Carroll, Alice's Adventure in Wonderland

Knowing what you know now, what do you think? Does your study point you in a specific direction? Will you change anything in your program? Where do you go from here? The summarization stage is the place where new ideas and ways of thinking emerge from findings—those piled-up bits of data.

> The most frequent result of conducting research is new questions.

Probably those new questions are better and more to the point than the original one. Most research reports end with a section that discusses the need for more research. This is not merely a plea for more funding; it is a natural consequence of looking closely at complex issues.



Share Your Findings

Findings are soon forgotten, but not ideas.
Glaser, 1978

What a lot of work, and what an exciting result! Share your results with your colleagues. There are two structured ways to do this:

Papers

We feel it is very important for practitioner-researchers to write about their research. Certainly you should share the information with your colleagues, so that it stays alive and current. The act of writing further develops the last two stages of analyzing and summarizing. You may think you have wrung all possible statements out of your data until you begin to write about it. Then you will see more and more springing from those weeks of collecting information. When you write, you must force yourself to be clear, organized, and precise. Each time you struggle to write about your research, you become a better thinker. It is arduous work for most of us, and very rewarding. See Appendix B for more help with writing a research paper.

The Research Network keeps copies of members' research reports on file and publishes the Year in Review, an annual compilation of research reports. The Network also encourages members to submit their papers to the ERIC system.

Presentations

Another way to share your results is through presentations before your peers. In Virginia, you have many opportunities to do this: the summer institutes (VAILLs), our professional organization (Virginia Adult And Continuing Educators - VAACE), and Yearly Evaluative Staff Meetings, just to name a few. When you present your study to others, three things happen: More practitioners become interested in this research activity, you gain confidence about your own prowess as a researcher, and you get the benefit of your audience's ideas, which will enrich your research now and in the future. Different research presentations will be interesting to different audiences. The staff at the Research Network can help you find appropriate presentation opportunities and suggest a possible presentation format.

NOTES

NOTES

What To Do If You Get Stuck

Just about everyone gets temporarily stuck in this process. Don't despair if it happens to you. Here are some suggestions for getting yourself out of a slump.

TALK

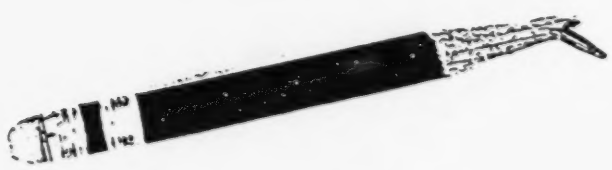
Go to your colleagues and talk about your research. Ask your family to look over your data and to talk about what they find interesting or surprising. Call up the Network office for a chat. Every stage of the process can be made easier by bouncing ideas off other interested people. Many teacher research programs help researchers in groups, not individually. The group serves as a sounding board, an advisory team, a questioner, and a support. The Network itself functions as a supportive group of researchers, but we also encourage practitioner researchers to form study groups (within easy driving distance, if possible) to meet together regularly for advice and support.

WRITE

Yes, this may work even if it's the writing that has you stuck. Get something down on paper, even if it's rubbish. Questions and concerns are easier to deal with when they are pinned down with words. Journals are good places for venting frustration. Some researchers like to draw diagrams or use manipulatives (clay, Legos, etc.) to help them organize themes or see where they are going in their paper.

READ

Reading is particularly helpful once you've been working with your question for a while. Reading how others have fared in your chosen area of inquiry will broaden your vision and make you feel less lonesome. Their reports will begin to make sense and you may find that other researchers have also been beleaguered by people who don't answer their surveys or by out-of-focus video cameras. The staff at the Research Network or the Virginia Adult Education and Literacy Resource Center can help you find appropriate books and articles. The reference librarian at a local college or university will also be able to help you find research related to your study.



CASE STUDIES

When venturing into new territory, it's comforting to know that others have been there before you and that you can benefit from their experiences. Five Research Network members who have conducted their own research projects have shared their reflections about their projects with us. Excerpts from their stories are re-printed here with notes to assist beginning researchers.

The various stages of research are noted in the left margin as they are discussed in the narrative. These stages relate directly to the steps discussed in the previous section. Comments, cautions, and words of encouragement are noted in the right margin.

Some background for each project will help you understand their stories:

Marty is a graduate student who is interested in the use of calculators, especially how they can be used during GED testing. She conducted an ERIC search to find the current trends in research regarding this topic. Her project is still in progress; she is just beginning to write up her findings. Her story reads like an exciting detective novel, a high-speed

chase through the literature, uncovering interesting reports, calling up well-known researchers, tracking down obscure books...and you thought library work was boring!

Diane and Susan worked collaboratively on a single research project. They were "guinea pigs" for the Network, exploring how a university trained researcher (Diane) and an Adult Basic Education (ABE) teacher (Susan) could collaborate and draw on each other's strengths. Their story is a good example of how research is born of classroom experience, particularly students' concerns about their learning.

Antigone, an ABE teacher, worked closely with a counselor at an adult education learning center. This collaboration between two ABE educators illustrates the use of student writing samples, interviews (they talked to the school secretary and security guard as well as students and teachers), and team work.

Joan is an English-as-a-Second-Language (ESL) teacher in Northern Virginia where the classes are full to overflowing. She conducted her research basically on her own, although she stayed in contact with another ESL teacher who was also conducting similar research and both of them belonged

to a six-member team of researchers. The larger group of six were spread throughout the state and all were investigating possible factors in the retention of students. Her story is a good example of focusing the research question. She ended up looking closely at bonding in the classroom, mainly because it interested her. She used her own class as a case study.

Marty

IDENTIFY THE RESEARCH QUESTION

I was doing just the math portion of the TABE test - I was administering it to a potential workplace environment class and somebody asked the question, "Can I use a calculator?" Now in this particular workplace environment, the reason the company was implementing this basic skills math class was to prepare the workers to take the SPC (Statistical Process Control) course. All of the methodology dealing with SPC is calculator based, so they're going to be using their calculators in the end. In a sudden flash I just said, "Yes, go ahead and use them." and one of the people raised the question, "Won't that mask the ability...Won't that give you a false reading of the results?" I said, "Well, just wait and see how it comes out." What was running through my mind was, "Will the calculator skew the results of the test?" and in my own mind, given the number of word problems on the test, I answered that as "No." Even though there are some straight computation problems, I thought there were enough of the other kind. Even so, they did not indicate that the calculator helped them because they were scoring at pretty low levels.

The Research comes from an "I wonder..." moment in the classroom.

I think what I did - in that flash - was the beginning of my research project. That was just a totally on-the-spot, amateurish kind of thing. From then I wondered what would happen if I tried some real experimentation, if I set up a control group and an experimental group, what would really happen, and what would the difference be?

COLLECT INFORMATION

The Network suggested that I do a literature search on the use of computers during standardized testing first, before I tried any experiment. When I ran the first ERIC search on calculators, the literature divided itself into two discreet areas. One deals with calculators in instruction and the other deals with calculators in standardized testing.

When I do the actual writing, I will have to develop a bridge between the two. The instructor needs to prepare the student for the tests and then, following the circle around, the test needs to test what is being taught in the instruction. You see what I mean, it just goes around and around. That's why they are very interrelated.

There were copious references for the research related to instruction. There has been a lot of stuff written all the way from pre-school to the first couple of years of college. There has been a lot done with using calculators for special education populations, things like that. The ERIC data base, when I put in "Calculators" and "Standardized Test" and "Adults," turned up zero articles. The next thing was just using the descriptors "Calculators" and "Standardized Testing" - that only turned up 9, one of which I threw out because it wasn't applicable. So what I found was that on the instruction end, there were lots of references...and at the standardized testing end, it was very sparse.

ANALYZE DATA

I compiled a bibliography just out of the education index. I worked backwards, reading the current articles first. Several prominent names came to the fore, and that's what I began to focus on. Early on I developed a list of about 10 of what I called "recurring themes," common threads running through all the articles. I've had to develop a system to collect all this information and organize it. I xerox all the articles then just catalog them in different classifications. The ERIC search of calculators and standardized tests, that's in my core. Then I have the instructions file and other testing files. I do a lot of underlining and color coding. If there is an article that deals half with instruction and half with testing, I'll go through and underline the parts I think are important in different colors, based on the different themes.

COLLECT INFORMATION

Then I read about something called the "Calculator Information Center." I couldn't find out anything more about it, so I called one of those prominent researchers and asked her. It was like doing detective work! She still maintains the last vestiges of the Calculator Information research in her office and she was going to have one of her research assistants pull me something and send it to me - everyone has been super nice about it. I've enjoyed making these phone calls to these practically famous people! It's really great to say, "I read your article and let's talk about this part of it and what did you do about this and this?"

Notice that she goes back for more information after she began to analyze.

There was another real important piece of research, a big booklet dealing specifically with calculators and standardized testing, and I couldn't find it anywhere so finally I turned to the College Board. I had even sent for their catalog and couldn't find it there. The fellow I talked to there said they had pulled it out of publication (it was published in 1989) because a lot of the assumptions were no longer accepted. The book was originally valued at $6-$7 but he said he'd just send me one.

Next, I'd like to go to the teachers. A lot of these articles I'm reading reflect opinions of K-12 teachers out in the field. A lot of teachers are not being represented. A lot of them are just out of the loop.

Research ends with more research plans!

WRITING

You can take this thing as far as you want to go with it, but I'm very conscious that there is a deadline and I've got to bring this research phase to an end and start thinking about how to put everything together. For me, the writing is very fast because I like to do it and once I get started it doesn't take much time and that's why I'm not so worried about that. What I'm worried about is saying, "I'm going to stop now and build this paper off of what I have and not try to enlarge anymore." I'm at the point now, once I get a couple more

Sometimes it's hard to stop gathering data.

Stop when everything you hear (or read, in Marty's case) is basically the same.

pieces, I am going to stop, but what I'm really just aching to do is extend to the international and see what they're doing. But that would entail learning all about their standardized testing system, and that's just too much.

Diane and Susan

The participants in this collaborative inquiry project were Diane, a university trained researcher with experience in quantitative, qualitative, historical, and evaluative studies, and Susan, an adult educator with four years experience. Susan began as a volunteer tutor, became a tutor trainer, and is now teaching adult education classes in a variety of settings.

Susan begins telling their story:

We met to discuss our involvement in the project and to get to know each other better. Diane had some specific questions to ask me about my interests. We thought that it was important for Diane to come to my classroom to see and become familiar with the setting, since the project would be grounded in the environment and experiences of this particular classroom.

IDENTIFY A RESEARCH QUESTION

I shared aspects of my work which were interesting or intriguing to me. We sifted through a variety of topics to find one that interested both of us. In the end, we focused on interviews I had conducted with my students in October, in which I found that they felt guilty and frustrated over the amount of school work they were doing outside of class. Many were concerned that they didn't have enough time to do enough "homework" to learn quickly. I introduced a calendar activity, where I made copies of monthly calendars and the students filled in each day the learning-related activities they performed outside of class, along with the amount of time spent each day. Each student decided for himself what he would consider a "learning-related" activity. I collected these at the end of the month, and we continued with them throughout the year.

Together we generated eight research questions. Some of the questions were as simple as

"What is the average amount of time spent on outside class activities?" Other questions were more complicated, involving relationships which were not easy to measure, such as "How do outside activities effect rate of skills improvement?" or "What is the relationship between outside activities and evolution of student goals?" At that point I thought we would be able to make some statements about all of these questions. But when I began looking at the data, and writing, I was less confident that I could say anything conclusive about some of the questions. There were just too many variables.

Focus your questions based on the information you can gather.

We did a lot of thinking out loud to craft questions that our data sources could answer. We questioned each other's assumptions. For example, at the onset, I told Diane I didn't think watching TV could be a relevant outside activity. She disagreed, noting that some programs could encourage students to think and students may be reading off the television (e.g. Jeopardy). When I checked this out with my students, I found that they too considered some TV shows relevant - news programs, Jeopardy, Wheel of Fortune, and educational shows were mentioned. Diane, as an outside observer, could see things that I might overlook. Her background and experience in research were very helpful in designing the questions and measurements used.

Diane continues:

COLLECT INFORMATION

I'm glad Susan found my background helpful, but it presented some problems, too! I had to guard against creating meaningless, technical questions. Susan was helpful in keeping the discussion focused on finding information that would actually help her in the classroom.

As we formulated the questions, we discussed ways to gather data. We tried to keep our sources

to a minimum. We did not want to create an inordinate amount of additional paperwork and record keeping for Susan or her learners. In the end, we did not address all of our original questions. I don't think it was a matter of not collecting the detailed information to confidently answer the relationship questions, it was more that we did not have a large enough group, nor did we want to conduct the complex statistical procedures needed to state our conclusions confidently.

Be realistic about what you can do.

Experiment with your own balance of teaching/ data gathering.

We identified who would be responsible for what aspects of the project and the project's time frame. Susan would conduct student interviews in January and May, monitor all classroom activity and keep records, including a journal. I would conduct the literature review and help in data compilation and analysis in May and June. I also kept a journal.

I conducted an ERIC search during this time. The search turned up very little. Either we were marching into uncharted territory or we were not naming our work properly. I duplicated the search abstracts and shared them with Susan. At each meeting we swapped materials and resources.

We met in March, when we discussed the project and shared our thinking on the experience to date. Susan had prepared a list of questions to review and discuss. Results of this discussion and the rest of the meeting assured us that we were on the right track.

Our next meeting was in April at my home. Here we reviewed data gathered to date and pertinent literature on critical reflection, program development, and Vermont's Institute for Self Reliance. We talked about our personal philosophies of adult education, sharing our current interests and concerns.

ANALYZE DATA

Our purpose here was to reacquaint ourselves with the questions and to organize the data. We decided to look at the data in two ways. First of all, a case analysis was needed to see if each student changed over time. Secondly, we would compile data on all students to look at patterns. This helped us determine whether or not we needed to collect more data, or to look at the data in different ways.

They began to analyze data that was gathered, and then decided to get more information.

At this meeting we ran out of time before we ran out of work. We spent the final forty-five minutes organizing the data and deciding how to proceed. Susan felt that she should continue to compile and organize the activity charts because of her familiarity with the learners. She would then write up her preliminary thoughts and send them to me for review.

It's OK to go back and forth like this.

We met again briefly in July to review the draft and exchange books. Further examination of the data and reading in the field lead us to the "learning how to learn" literature. Here we found more information to support our thinking. I took Susan's draft and edited it to conform to a more standard reporting format.

Co-researchers can be on the look-out for pertinent books and articles for each other.

Susan concludes:

I would like to be able to say that as a result of completing the calendars, students improved academically. I would like to go further and add that the amount of time spent outside class correlated to the rate of students' progress. In truth, I can't make either of those statements.

What I can say is that through this calendar activity, the students' perceptions of outside activities changed. By looking at outside activities, some students began to realize the variety of learning they were routinely doing.

The results of this study were not intended to be universally applied. The students involved in this study are unique. What may be meaningful to other teachers is the process of finding out information about your own students. As more teachers conduct this type of research, we may see trends throughout many classes.

My research gave me useable information about how to improve my teaching. But the research process increased my curiosity about how learning happens. I became a keen observer in the classroom. I tried out new ideas, always asking "why?" When I stepped back, I saw my class differently. Instead of saying "Class went well today" I found myself asking "What made today's class go so well?"

Simply doing research improves your ability to observe and "read" your class.

Antigone

The question was something I had thought about for a long time because I had seen students come and go so fast during my first adult ed job. I thought if we could come up with any answers that were supported, it would be rewarding.

COLLECT INFORMATION

I didn't have much of an idea of what I wanted to research before I came to the first group meeting. I knew it was going to be qualitative research and I've always gotten informative results from students from their writing. It's always helped me in my teaching. So I guess I did kind of assume I would be using student writing for data collecting. During the course of the project, I asked my students to write several pieces on their school experience and expectations. We also video-taped interviews with individual students, a group of teachers at our learning center, and several support personnel. During these interviews we asked people to talk about why so many students leave ABE before they reach their goals, and what was necessary for students to stay.

Note how she used several sources to learn about why students leave before meeting their goals.

I began to notice that some of the things people were saying were so universal that I would note them less frequently [in the journal] because they were just a given. And then on the other hand, some of the things I was hearing - and I started seeing them in the student papers as well - I began to realize were more serious than I had thought, like when people would say "no motivation"; that always seemed like sort of a sanctimonious cliché. I was dismissing people who were saying it until I realized everyone was saying it, so it actually had some meaning.

Her assumptions are brought to light.

She adjusted her thoughts after so many people were saying the same thing about motivation.

I didn't start out to look for the idea of motivation affecting retention. That's what was such a pleasant surprise, because it really rang all the more true as an answer. I think we felt that

A true researcher, she is "delighted" to discover something surprising.

things in the atmosphere, things in the environment of the adult ed program were going to be mentioned as causes, things that we could attribute to aspects of the program. These responses about student motivation being the key to retention show how important it is that students feel that they have come up with the reason for being there.

That's sort of reassuring in a backwards kind of way, when you're convinced it's one thing and your research actually shows up something else. But that wasn't what we were expecting. How did I keep my pre-conceived ideas about the causes of retention problems from coloring my willingness to accept another solution? I think I had no choice. I just kept hearing other things.

I think it's important to be organized, to have some kind of plan of action and not scramble. But I guess being flexible, not having pre-arranged what you're going to do and how you're going to do it - to the extent that you can't change when things are adding up differently - is probably the most important.

I found it very useful to keep a journal for this project. It was interesting to see the differences in what I was bothering to write down over time. Some things were sort of taken-for-granted responses or observations. I wrote a few times a week. When I was teaching 4 days at one point, I was writing every day, and then of course kind of fell out of the habit with writing maybe two times, mid-way through and then at the end of the week. This semester, when I've been teaching just one class, I've begun to write in it just once a week. I wrote when I was home at the end of the day.

I've observed myself listening more. I began to listen even more carefully to what the students were saying.

The research project went easier because we [she and her research partner] *got to decide what we were going to do so much. I was exceptionally lucky to work with someone I get along so well with. We see eye to eye and have similar perceptions to begin with, so that certainly helped. I think that, because there were two of us working together, we probably went further, did better, had more ideas. But everything about the nature of doing qualitative research was congenial to our expectations.*

Antigone had analyzed the data on her own and then with a research support group.

ANALYZE DATA

The larger group meetings were very helpful, too—the brainstorming and all the shared experiences. We had a lot in common and then a lot that was unique to each of our situations. Discussing those things was pretty thought provoking.

WRITING

I did enjoy writing the paper, but I would have enjoyed it a lot more had I done it sooner! I feel things are missing; I would have liked to be more complete, more thorough. If I had given myself time I would have been happier.

Writing takes time - both for those who love it and those who struggle to get it done.

SHARING

We presented our findings at the VAACE conference. The whole set-up, the opportunity to go around to other peoples' presentations, was awfully nice. And the opportunity to talk about our work with whoever wanted to listen was also fun. One gentleman in particular seemed so fascinated with the topic and the results.

The project results were informative and it was really inspiring in terms of what it made me feel was possible to be done. I think, "What if people continued to examine questions, to look at what students had to say?" How much adult education could be improved, slowly but surely! It was just delightful to allow myself the opportunity to ask students <u>their</u> opinions about retention.

I feel someone has to go into a research project with interest. I'd hate to talk someone into it, but I would highly recommend it to any teacher. I think it's also a nice thing between a teacher and burnout - a buffer. It adds another dimension to the work, it's very important.

I would tell a new researcher to listen to your students and take what they say very seriously. Match that against other things you're hearing. Of course, it depends what the research question is, or what you are trying to determine. But I think in adult ed you have to hear it from the student first. So I guess that is what I would say, to look to the students for answers or at least for hypotheses. I guess qualitative research really has some things in common with quantitative research - you can't believe what you're not seeing in front of you.

The motivation to do a research project comes from within.

Joan

I signed up for the project because it sounded intriguing. What was intriguing was the idea of doing something I hadn't done before, learning about what research was and how it was conducted. And I think the idea of research done within the class was very interesting. I don't think people look often enough into what goes on in the class.

IDENTIFY A RESEARCH QUESTION

Narrowing down our question was one of the most difficult parts. I don't think that we really understood how to do it. I'm not sure that we succeeded. At first, our question was pretty general - just "What influences students to drop out or to stay in class?" We finally focused it by just talking and talking about it - with each other and with other teachers. We began to hear a lot about class bonding. We realized that we really didn't know what class bonding was - whether there was even a relationship between bonding and retention. So we asked other teachers if they felt there was a relationship. We mainly talked to these teachers just to see if they thought we were on the right track. Everybody knew right away what we meant by class bonding, their eyes lit up when we said that because, at least in ESL class, that's something that you know happens.

Focusing can be difficult. Joan and her partner began gathering data and then focused their question.

Sometimes you have to make a few false starts before you fine-tune your question.

COLLECT INFORMATION

Another time when we talked to teachers, we asked them how they knew their classes were bonding. We did a telephone survey asking teachers about bonding activities in classrooms. And to be truthful that was a great question to ask, because it brought people back to the experience. I think sometimes questions are so general and so open-ended that people's minds can't focus on them. That particular question - if you've had classes that bonded well and classes that didn't bond well - immediately brought people into the situation. Everybody could remember that happening and then

They used telephone interviews.

they could relate to the experience and pull things out of that - "Well gee, I think a factor was this or that..."

I think that the teacher interviews were very helpful, and again I don't think we ask teachers enough about what they think. All the teachers were very happy to talk to me, they were so intelligent it took my breath away. They had obviously observed phenomena in their classrooms over the years. They had drawn conclusions. They knew things, but nobody had ever asked. When I asked one teacher I was on the phone for hours. It was like she was just waiting for someone to ask her what she thought about this particular subject. We've got a wealth of experience there to tap!

These were individual interviews with a list of questions (scripted).

I also observed my own class in terms of bonding. I started to look just at the social process. It was extremely interesting! To see when the group seemed to work well together, what told me they were working well together - to pinpoint that. And to see how the whole process worked. There were all sorts of interesting things happening. At the same time, I observed myself to see what I did to make the group function together.

A case study in self-observation.

WRITING

I tried problem-solving exercises [suggested by other teachers] *and took notes on what happened. I kept track of my observations of myself and the activities in my journal. I wrote in my journal every Sunday afternoon. I enjoyed writing in the journal. It was a real pain in the neck to do, but I took notes through the week. I kept notes in my lesson plans or I would write down conversations or things that happened in the classroom and I'd pull it all together on Sunday. One thing I discovered; this was a very big class and a lot was happening on a social level all the time. It was amazing to me just how complicated human interaction is.*

Notice use of journal to pull an experience together.

I noticed more of what was going on in the class while I was trying to write things down. I don't know that I would have ever paid such close attention without the journal. It was like human theater, like a drama. It was like writing about a drama for nine weeks. I think that goes on in everybody's classroom. I think all these scenes are constantly being enacted.

Writing the paper was painful! It's very hard to write and be accurate and say what you mean. I love to write but it's time consuming, especially if you are trying to be very accurate in your writing. It's like any other kind of writing; you write and then go back and read it and change this and that. There's no doubt about it, it's very hard work.

Joan kept a voluminous journal, yet she struggled with the paper.

ANALYZE DATA

There's another thing that's very hard about the writing. I don't know if other people have this problem, but for me I don't always know what I see. Or I can see something but I don't always recognize its significance. It helped to re-read what I wrote and ask, "What have I missed here? There's some piece, something interesting, something important happened here that changed the group or the cohesion process." Sometimes I would talk to my husband or my daughter. They asked questions and made comments, and I'd say, "Oh yeah! That's what I saw but I didn't recognize that it was important enough to put in the journal."

Again, she goes back to analysis in the midst of writing - quite OK to do. She asked family to help her "see" her data.

One problem with writing the paper was defining terms. For example, I wrote my whole summary and then didn't define the term "class bonding." In the end, the term was defined using criteria that the teachers suggested.

Definitions of terms can be an unexpected problem. She asked teachers to define bonding.

I read what the other teacher-researchers had pulled out of their research projects and I thought that was extremely interesting. I want to go back and look at my research project again now.

The other thing I got out of reading the summary was this business about the teacher playing such a critical role in retention. That's what I didn't want to put in my summary. My students all wrote about me. And they answered the questions I asked in terms of me - that it was because of me, because I set the tone, because I was friendly, and I did this, and I did that. I found that so embarrassing, and I had no idea whether they meant it or were just trying to flatter me.

You need to know exactly what you're talking about - writing a definition helps.

I think it would be useful to others doing research to keep a journal. I think it's a wonderful habit to get into, though maybe not in the detail that I did. I found that writing in my journal and observing my class gave me practical information for teaching. Now I'm teaching a program funded by the federal government. We're teaching communication skills to bank employees. The first thing I introduced was keeping a log. Not a lesson plan, which is quite different. What you plan to do is often quite different from what you really do. I made up a log sheet and introduced it to the other teachers. I got that idea directly from my research project.

Remember, the researcher is part of the context for research.

Appendix A: The ERIC System

The Educational Resources Information Center (ERIC) is a nationwide information network designed to provide users with ready access to education literature. At the heart of ERIC is the largest education database in the world; it contains more than 735,000 bibliographic records of documents and journal articles. These records are indexed and abstracted to allow for easy searches by topic. It's easy to submit documents to ERIC, which means there is a lot in there. Some of it is excellent, the usefulness of other items is dubious. By reading the abstracts - which are simply summaries of the articles themselves - you can usually figure out which ones will be relevant to your work.

ERIC offers free reference and referral services to the public through its network of Clearinghouses and its toll free number 1-800-LET-ERIC. Staff are available to provide ERIC publications, answer questions about ERIC, locate hard-to-find documents, and refer callers to other appropriate information sources.

There are 1,000 locations designated as ERIC information service providers. Each maintains a substantial microfiche collection and/or can perform computer searches of the ERIC database. Typically, university, state, and large city public libraries offer access to ERIC. Searches on ERIC can be done manually, online, or by using CD-ROM (compact disc).

Whichever search method you use, your first step is to define and focus your topic. Identify key words (descriptors) to use in your search. You can consult the *Thesaurus of ERIC Descriptors* to help you choose appropriate words or terms. The *Thesaurus* is available at the service provider site.

LITERATURE SEARCHES

MANUAL: This is the "old fashioned" way, for those without computer access. Consult the printed indexes (*Resources in Education* and *Current Index to Journals in Education*) to find the citations of appropriate documents.

Computer searching is the most efficient means of retrieving a large amount of information because it allows you to combine two or more subjects. Both of these methods allow you to identify, by the use of Boolean operators (these are the words AND, OR, NOT

which are used to join descriptors), articles that are indexed under different subject terms and that cut across a variety of subjects. You can limit your search to such fields as author, publication date, subject, or document type.

ONLINE SEARCHES - For experienced ERIC users: These can be both efficient and effective, provided you know what you are looking for. If you have not sufficiently focused your topic, however, it can result in irrelevant material and because you are paying for computer time, can be expensive.

CD-ROM SEARCHES - For novice ERIC users: These menu-driven programs make it easy for novice searchers to locate information. After you input the descriptors for your subject, the system will help you locate citations containing terms related to your topic. Because there are no online charges being incurred, you enjoy the luxury of "browsing" while the computer does the searching.

Using different sets of descriptors, and different Boolean operators, you can combine or separate terms to "fine-tune" your search. You can now browse through the citations and mark those you would like to print out. You can choose to print only certain selected fields. (Citation only = CITN; title and abstract = TI, AB)

Regardless of which type of search used, the result is a list of article citations identified by an ERIC number, which has either an ED or EJ prefix (for example, ED3489 or EJ6631). ED means ERIC document, and EJ means ERIC journal. ERIC documents are generally kept on microfiche or film. Many libraries carry all the ERIC documents. ERIC journals articles are re-printed from published journals and may be available on fiche or in book form. If the facility has a microfiche reader/printer, you may choose to read from the screen and print only selected items for further study. There will probably be a charge for each page printed. Libraries do not carry all journals; if your library does not have a journal article you need, ask the librarian to see if you can get it through inter-library loan.

The Reference Librarian is your key to successfully learning your way around the ERIC system at your library. Inquire about best times and for assistance in using their system. Ask if there are workshops (often offered to incoming students) that you might attend. Be aware of heavy student use times (when are student research papers beginning?) You may need to sign up for a time to use the system or it may be first-come, first-served. Some locations may impose a time limit to allow greater access for all users.

SUBMITTING DOCUMENTS TO ERIC

In addition to using ERIC in your research process, consider submitting your completed findings to ERIC for others to read! Entering your work into ERIC will ensure continuous availability to others.

Submitting your document is easy. There is no fee to pay and only one form to complete and sign. A Reproduction Release Form is available from ERIC or the Research Network.

A document does not have to be formally published to be entered into the ERIC database. In fact, ERIC seeks out the unpublished or "fugitive" material not usually available through conventional library channels. ERIC would like to be given the opportunity to examine virtually any documents dealing with education or its aspects. The ERIC audience is so broad (encompassing teachers, administrators, school board members, librarians, researchers, media specialists, students and their parents, counselors, and every other type of educator or educational practitioner) that it must collect a wide variety of documentation in order to satisfy its users.

The information for Appendix A was obtained from:

All About ERIC published by the Office of Educational Research and Improvement, US Department of Education, August 1991.

Submitting Documents to ERIC published by the Educational Resources Information Center, Office of Educational Research and Improvement, US Department of Education, May 1991.

Appendix B: Writing Up Your Research

A SUGGESTED OUTLINE

A. Introduction

1. Identify yourself and your setting

   a. Your role

   b. Your locality

   c. The type of program in which you work

   d. Your class (part time, rural, hours per week etc.)

   e. Your students (multi-level, age range, interests, etc.)

2. State your connection with the Research Network

3. Describe the events which led you to want to do this particular research project.

   a. State your research question

4. List a background of research literature

   a. If you have done a literature review include a summary of your findings here.

B. Methods

1. Describe what you did and how you gathered data

a. Be specific; include the number of people you spoke to, the number of surveys sent and returned, etc.

b. Discuss any problems you had with your methods - it will be helpful to others who read your report

C. Findings

1. Create a graphic representation of your findings, if possible

a. Charts, lists, pie graphs, etc. are just some of the designs you might use

2. Discuss your findings

a. Point out possible relationships or inconsistencies in your data. Look for trends or patterns in the information you collected.

b. Indicate what you feel is significant, but - at this point - avoid any interpretation (for example, don't say "I think this means that students want..." or " This must mean that teachers are frustrated.") Just give the facts.

c. Avoid value judgements about your data (e.g., don't say "I think this is a good trend" or "I think this is a major problem with ABE.")

D. Discussion and Recommendations

1. Interpretation - what you think your findings mean

a. Be careful not to go beyond what you can reasonably state from your findings.

b. You can give your opinion but make sure you identify this as your opinion.

2. Suggestions for practice based on what you've learned

a. What changes will you incorporate into your own practice?

b. What changes do you recommend for your program, for state policy makers or adult educators in general?

3. Suggestions for further research

a. Interesting research produces more good questions. What is still left unanswered after your project? How would you direct future researchers who wish to follow up on your work?

Notice that we didn't call the last step "conclusion." If you can't say anything conclusive about your study, then you can't really write a conclusion. That's OK. Harry Wolcott gives this advice:

> Work toward a conservative closing statement that reviews succinctly what has been attempted, what has been learned, and what new questions have been raised. I remind [graduate] students that it is not necessary to push a canoe into the sunset at the end of every paper.
> (Wolcott, 1990, p. 56)

E. Appendices

At the end of your report, include an appendix with samples of all the "instruments" you used, e.g., a survey, a list of questions you asked during phone interviews, etc.

F. Author

Assuming you are willing to be contacted by people who want to ask you more questions about your research, make sure you include your address and phone number somewhere in the report.

G. Acknowledgements

You can include an "Acknowledgements" page in the beginning of your report (just after the title page). This is a good place to say "thank you" to all the folks you interviewed, or who helped analyze data, arranged meetings, gave you release time to do this, etc. You can name names or be more general in your acknowledgements - whatever seems appropriate.

General Writing Suggestions

Throughout the report, keep the style and tone appropriate to your audience. In most cases, this will be fellow teachers, tutors, or administrators. Don't imitate professional journal style if you are not writing for a journal. Again, Wolcott has words of wisdom for us:

> Content is paramount - what you have to say, not how you say it. Style is critical but auxiliary in reporting qualitative research, necessary but not sufficient....No one can teach you to write; people can help you write a bit better.
>
> (Wolcott, 1990 p. 48)

Qualitative research reports use appropriate quotes from the data. This makes the report much more interesting. Use quotation marks to identify these quotes, but change the name of the person to preserve confidentiality.

Be careful not to state as fact that which is only suggested in your data. This isn't as easy to avoid as it may seem. A good way to test for this is to have other people read your report. Ask people from a variety of backgrounds who hold different opinions about the topic. It is also helpful to talk with another researcher to get objective comments. The Research Network can suggest a researcher who would be willing to read and critique your report.

Bear up! Writing is strenuous exercise. It takes time and effort to explain something well in writing and most people find it difficult to "expose" their ideas by putting them on paper for all to see. Although writing your report may seem time-consuming and bothersome, experience shows that it is a necessary final step in conducting research. As you struggle to find words, you will find new insights and ideas. The process of writing will bring your findings into focus and add meaning to your interpretations. The finished report is not only a testimony of your endurance and a vehicle for sharing your experience with others; it is an elegant finale to a worthwhile endeavor.

Appendix C: Network Resources

The Virginia Adult Educators Research Network, developed in 1991 through the Virginia Office of Adult Education, is the sponsoring forum for educators interested in conducting research. It provides assistance in developing research ideas, funding to support research projects, and assistance in preparing, publishing, and disseminating research findings.

In addition to this Guide to Practitioner Research, the Network provides a variety of other resources and publications which can be of help to practitioner-researchers:

Directory of Researchers - This listing of individuals in Virginia who have expressed interest and/or have experience in conducting research is a valuable resource for all practitioner-researchers. The Directory helps establish the "network" of collaborative relationships for researchers.

Summer Reading List - Each year several books are chosen to be reviewed by adult education practitioners, university personnel, or state staff. These reviews are provided as a resource to our members who are looking for professional reading choices.

Membership Letters are sent to the Network membership to keep them advised of practitioner-researcher activity around the state.

Adult Education Reader is a collection of selected articles, reprinted from published sources, on a specific topic or theme. This annual publication allows members to examine a variety of writings from diverse sources.

Year in Review - An annual compilation of Network-funded research projects, the YIR features the research writings of Network members during a 12-month period.

Summer Research Camps are sponsored by the Network as an opportunity for professional researchers and practitioner-researchers to meet and discuss a chosen topic and design individual research projects for the coming year.

Bibliography and Suggested Reading

Atwell, Nancie. In the Middle: Reading, Writing, Learning With Adolescents. Upper Montclair, NJ: Boynton/Cook Publishing, Inc.

Bogdan, Robert C. and Biklen, Sari K. Qualitative Research for Education: An Introduction to Theory and Methods. Boston: Allyn and Bacon, Inc. 1982 (second edition 1990).

Carroll, Lewis. Alice's Adventures in Wonderland. New York: Random House. 1946.

Duckworth, Eleanor. The Having of Wonderful Ideas. Columbia University, NY: Teachers College Press.

Glaser, B. Theoretical Sensitivity: Advances in the Methodology of Grounded Theory. Mill Valley, CA: Sociology Press. 1978.

Goswami, D. and Stillman, P., eds, Reclaiming the Classroom: Teacher Research as an Agency for Change. Upper Montclair, NJ: Boynton/Cook Publishing, Inc. 1987.

Hubbard, Ruth and Power, Brenda. "Finding and Framing a Research Question" in Patterson, Leslie, et.al. eds. Teachers Are Researchers: Reflection and Action. Newark, DE: International Reading Association. 1993.

Krueger, Richard A. Focus Groups: A Practical Guide for Applied Research. Newbury Park, CA: Sage Publications, Inc. 1988.

MacLean, Marion. "Voices Within: The Audience Speaks" English Journal, 72, 7, p 62-66, 1983.

Merriam, Sharan B. Case Study Research in Education: A Qualitative Approach. San Francisco: Jossey-Bass Publishers, Inc. 1991.

Miles, Matthew B. and Huberman, Michael. Qualitative Data Analysis: A Sourcebook of New Methods. Newbury Park, CA: Sage Publications, Inc. 1984.

Milne, A.A. The House at Pooh Corner. New York: E.P. Dutton and Co. 1928.

Mohr, Marian and MacLean, Marion. Working Together: A Guide for Teacher-Researchers. Urbana IL. National Council of Teachers of English. 1987.

Morgan, David Focus Groups as Qualitative Research. Newbury Park, CA: Sage Publications, Inc. 1989.

Patterson, Leslie, et.al. eds. Teachers Are Researchers: Reflection and Action. Newark, DE: International Reading Association. 1993.

Rilke, Rainer Maria. Letters to a Young Poet: Letter Number 4. New York: Norton Press. 1934.

Wolcott, Harry F. Writing Up Qualitative Research. Qualitative Research Methods Volume 20. Newbury Park, CA: Sage Publications, Inc. 1990.